CLAIMS

What is claimed is:

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1.   A method for fast paging of a memory block during memory block removal from a data

processing system, comprising:

receiving a request to physically remove a memory block device from said data

10   processing system;

translating a plurality of logical pages for said memory block device into a plurality of

physical addresses for said memory block device; and

15   issuing a single request to page out data located at said plurality of physical addresses to a

contiguous paging space within a disk space accessible to said data processing system, such that

after said single request is complete said memory block device can be removed.

2.   The method of claim 1 for fast paging of a memory block further comprising:

mapping said plurality of logical pages for said memory block to a plurality of physical

pages for said memory block device.

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3.   The method of claim 1 for fast paging of a memory block further comprising:

detecting whether a logical volume allocable for said contiguous paging space of a size

able to hold all said data located at said plurality of physical addresses exists in said disk space;

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responsive to detecting said logical volume allocable for said contiguous paging space of

a size able to hold all said data, temporarily allocating said logical volume for said contiguous

paging space; and

15   responsive to not detecting said logical volume allocable for said contiguous paging

space, dynamically creating a new logical volume for said contiguous paging space of a size able

to hold all said data located at said plurality of physical addresses.

4.   The method of claim 1 for fast paging of a memory block wherein issuing a single request

further comprises:

issuing a single direct memory access request to page out said plurality of physical

5   addresses to said contiguous paging space.

5.   The method of claim 1 for fast paging of a memory block further comprising:

receiving said request to physically remove said memory block device, wherein said

10   memory block device is a failing disk space;

issuing said single request to page in data located at said plurality of physical addresses to

a contiguous memory space within at least one of a random access memory and a disk space

accessible to said data processing system, such that after said single request is complete said

15   failing page space is removable.

6.   The method of claim 1 for fast paging of a memory block further comprising:

detecting a replacement memory block device;

5   pretranslating a plurality of logical pages for said contiguous paging space into a plurality

of physical addresses for said contiguous paging space; and

issuing a single request to page in data located at said plurality of physical addresses to

said replacement memory block device, such that only two input/output requests are required for

10   large memory block replacement.

7.   The method of claim 1 for fast paging of a memory block further comprising:

responsive to detecting that said single request is complete:

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deactivating a logical volume temporarily allocated for said contiguous paging

space; and

deleting said contiguous paging space from said disk space.

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8.   A data processing system comprising:

an operating system;

5   a processor that executes instructions of said operating system;

a memory comprising a plurality of memory blocks interconnected to said processor;

a disk space accessible to said processor;

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means for enabling removal of a particular memory block from among said plurality of

memory blocks by:

translating a plurality of logical pages for said particular memory block into a

15   plurality of physical addresses for said particular memory block; and

issuing a single request to page out data located at said plurality of physical

addresses to a contiguous paging space within said disk space, wherein after said single

request is complete safe removal of said particular memory block is enabled.

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9.   The data processing system of claim 8, further comprising:

means for mapping said plurality of logical pages for said memory block to a plurality of

physical pages for said particular memory block.

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10.   The data processing system of claim 8, further comprising:

means for detecting whether a logical volume allocable for said contiguous paging space

of a size able to hold all said data located at said plurality of physical addresses exists in said disk

10   space;

means responsive to detecting said logical volume allocable for said contiguous paging

space of a size able to hold all said data, for temporarily allocating said logical volume for said

contiguous paging space; and

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means responsive to not detecting said logical volume allocable for said contiguous

paging space, for dynamically creating a new logical volume for said contiguous paging space of

a size able to hold all said data located at said plurality of physical addresses.

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11.   The data processing system of claim 8, said means for issuing a single request further

comprising:

    means for issuing a single direct memory access request to page out said plurality of

5   physical addresses to said contiguous paging space.

12.   The data processing system of claim 8, wherein said memory block device is a failing

disk space and said single request is to page in data located at said plurality of physical addresses

of said failing disk space to a contiguous memory space within at least one of a random access

10   memory and a disk space accessible to said data processing system.

13.   The data processing system of claim 8, further comprising:

    means for detecting a replacement memory block;

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    means for translating a plurality of logical pages for said contiguous paging space into a

plurality of physical addresses for said contiguous paging space; and

    means for issuing a single request to page in data located at said plurality of physical

20   addresses to said replacement memory block.

14.   The data processing system of claim 8, further comprising:

means, responsive to detecting that said single request is complete, for:

5   deactivating a logical volume temporarily allocated for said contiguous paging

space; and

deleting said contiguous paging space from said disk space.

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15. A computer program product for selectively displaying mirrored addresses in a communication, comprising:

a computer readable medium; and

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program instructions on said computer readable medium for:

receiving a request to physically remove a memory block device from said data processing system;

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translating a plurality of logical pages for said memory block device into a plurality of physical addresses for said memory block device; and

issuing a single request to page out data located at said plurality of physical

15 addresses to a contiguous paging space within a disk space accessible to said data processing system, such that after said single request is complete said memory block device can be removed.

16.   The computer program product of claim 15, further comprising program instructions for:

mapping said plurality of logical pages for said memory block to a plurality of physical

pages for said memory block device.

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17.   The computer program product of claim 15, further comprising program instructions for:

detecting whether a logical volume allocable for said contiguous paging space of a size

able to hold all said data located at said plurality of physical addresses exists in said disk space;

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temporarily allocating said logical volume for said contiguous paging space, responsive to

detecting said logical volume allocable for said contiguous paging space of a size able to hold all

said data; and

15   dynamically creating a new logical volume for said contiguous paging space of a size able

to hold all said data located at said plurality of physical addresses, responsive to not detecting

said logical volume allocable for said contiguous paging space.

18. The computer program product of claim 15, said program instructions for issuing a single request further comprising program instructions for:

issuing a single direct memory access request to page out said plurality of physical
5 addresses to said contiguous paging space.

19. The computer program product of claim 15, further comprising program instructions for:

receiving said request to physically remove said memory block device, wherein said
10 memory block device is a failing disk space;

issuing said single request to page in data located at said plurality of physical addresses to
a contiguous memory space within at least one of a random access memory and a disk space
accessible to said data processing system, such that after said single request is complete said
15 failing page space is removable.

20. The computer program product of claim 15, further comprising program instructions for:

detecting a replacement memory block device;

5   translating a plurality of logical pages for said contiguous paging space into a plurality of physical addresses for said contiguous paging space; and

issuing a single request to page in data located at said plurality of physical addresses to said replacement memory block device.

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